

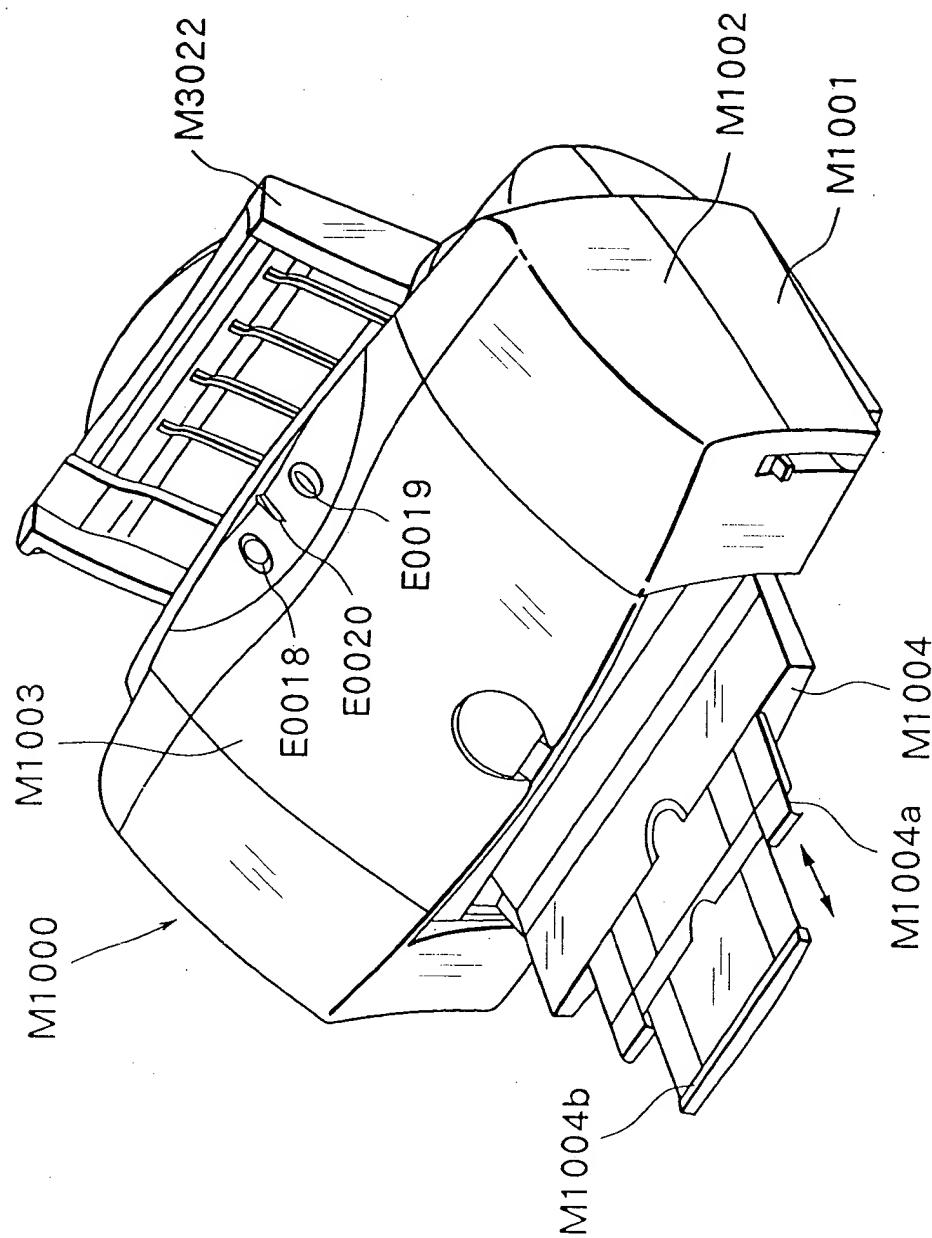
FIG. 1

FIG. 2

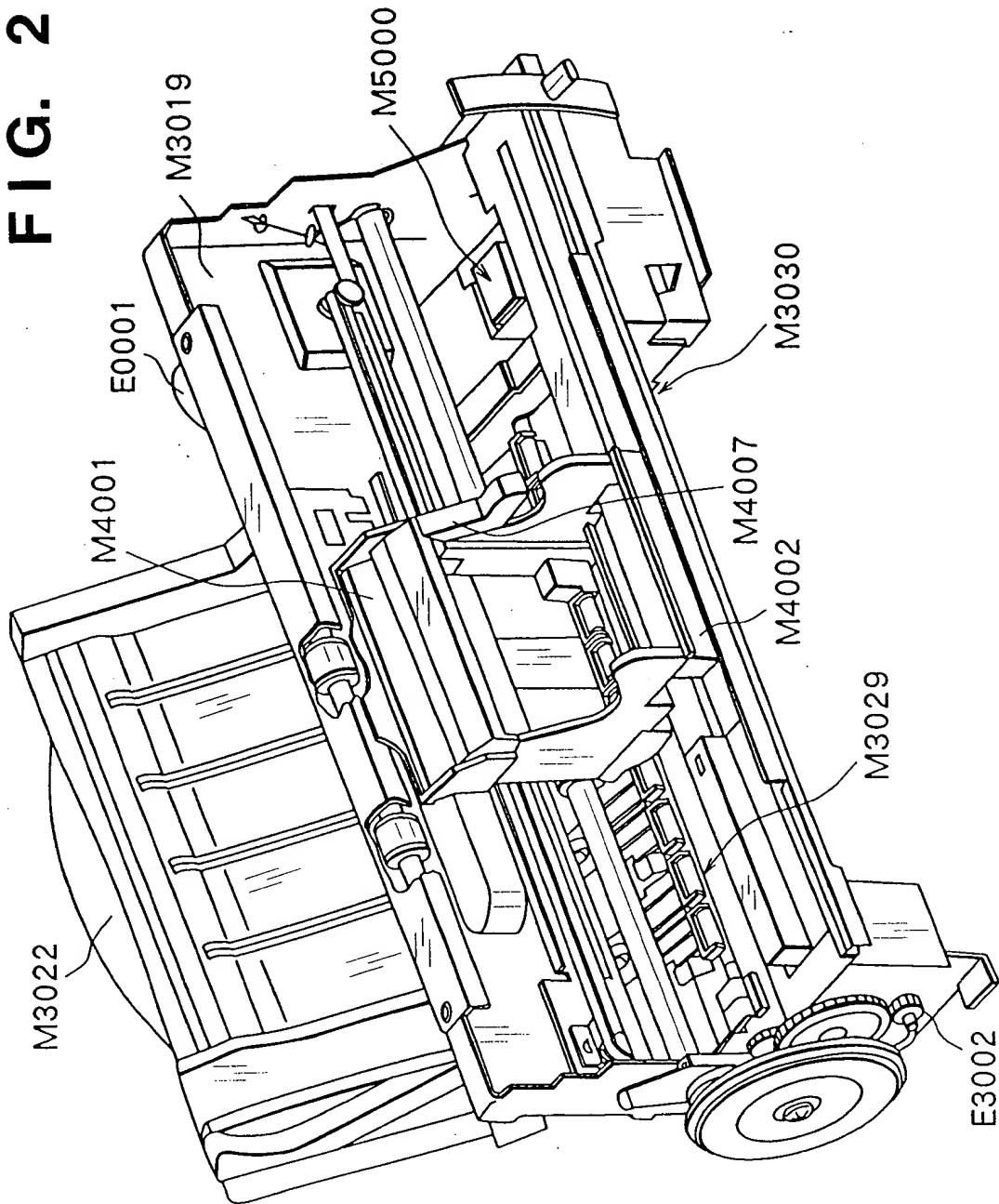


FIG. 3

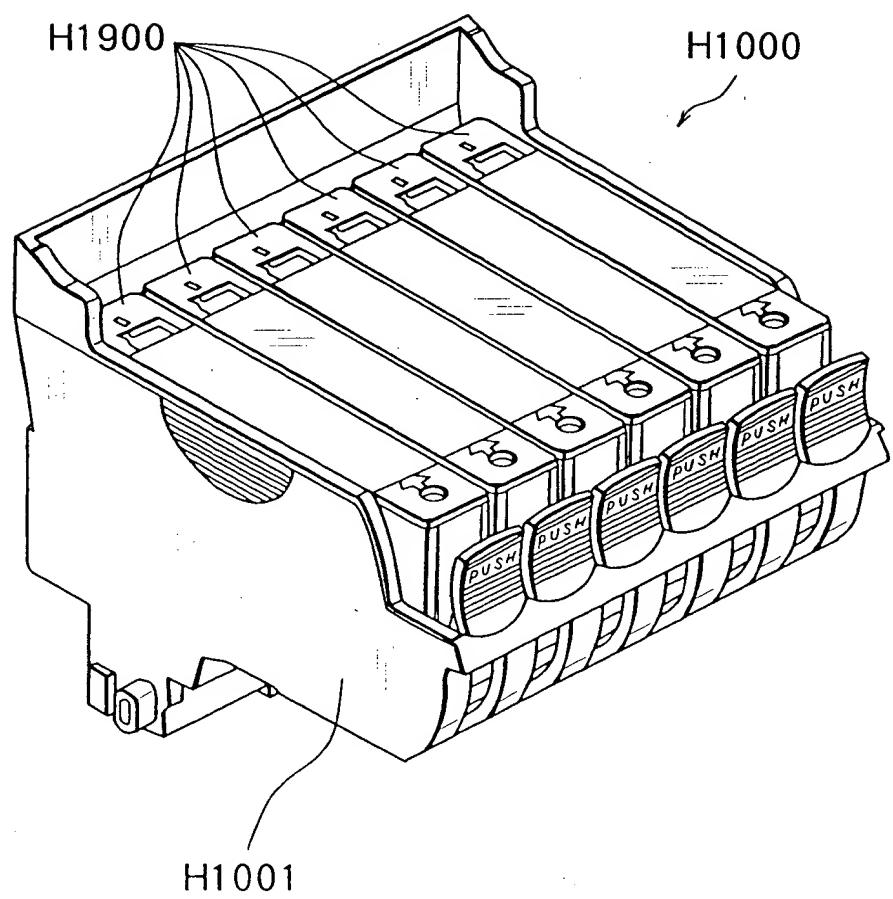


FIG. 4

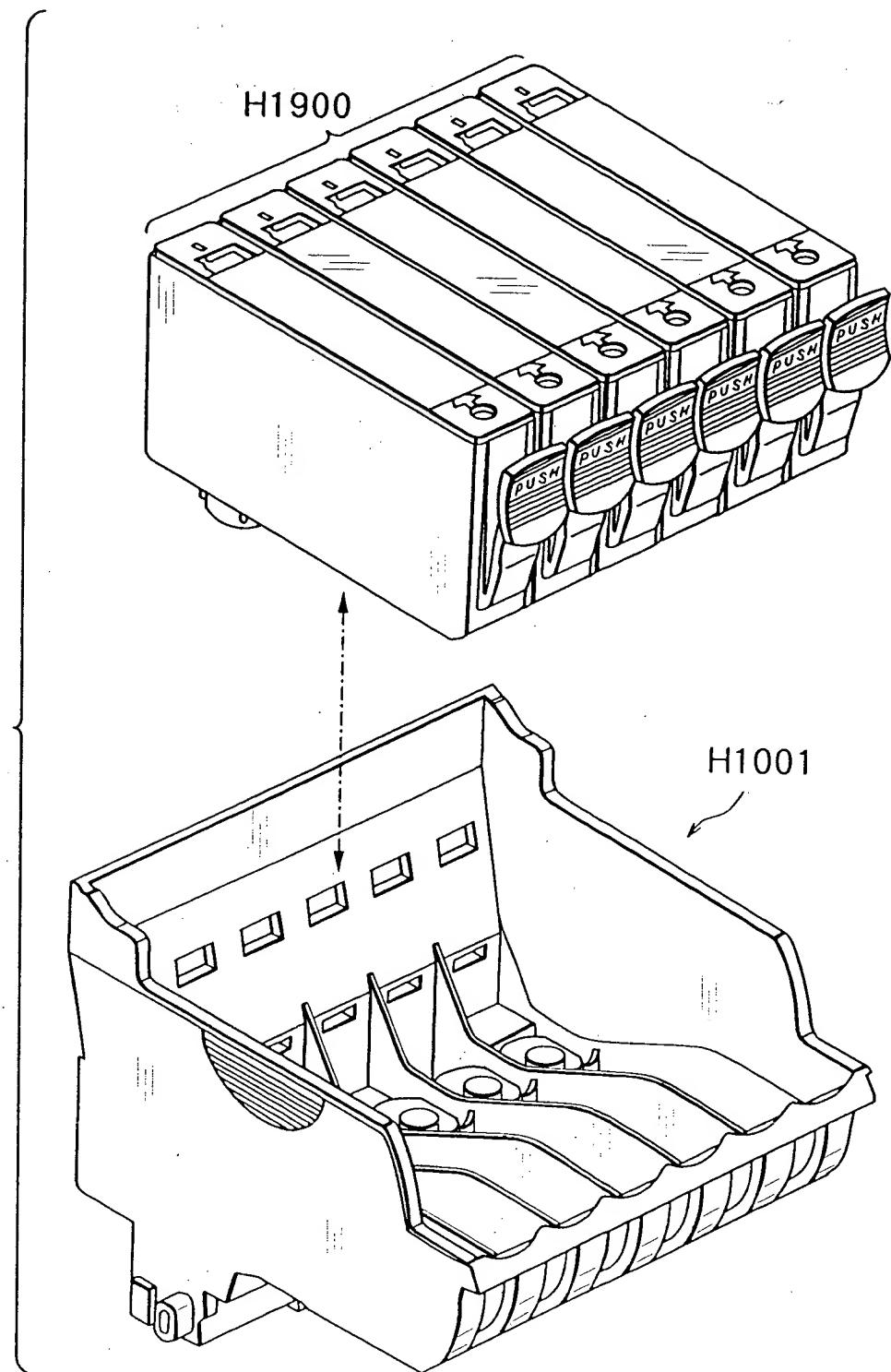


FIG. 5

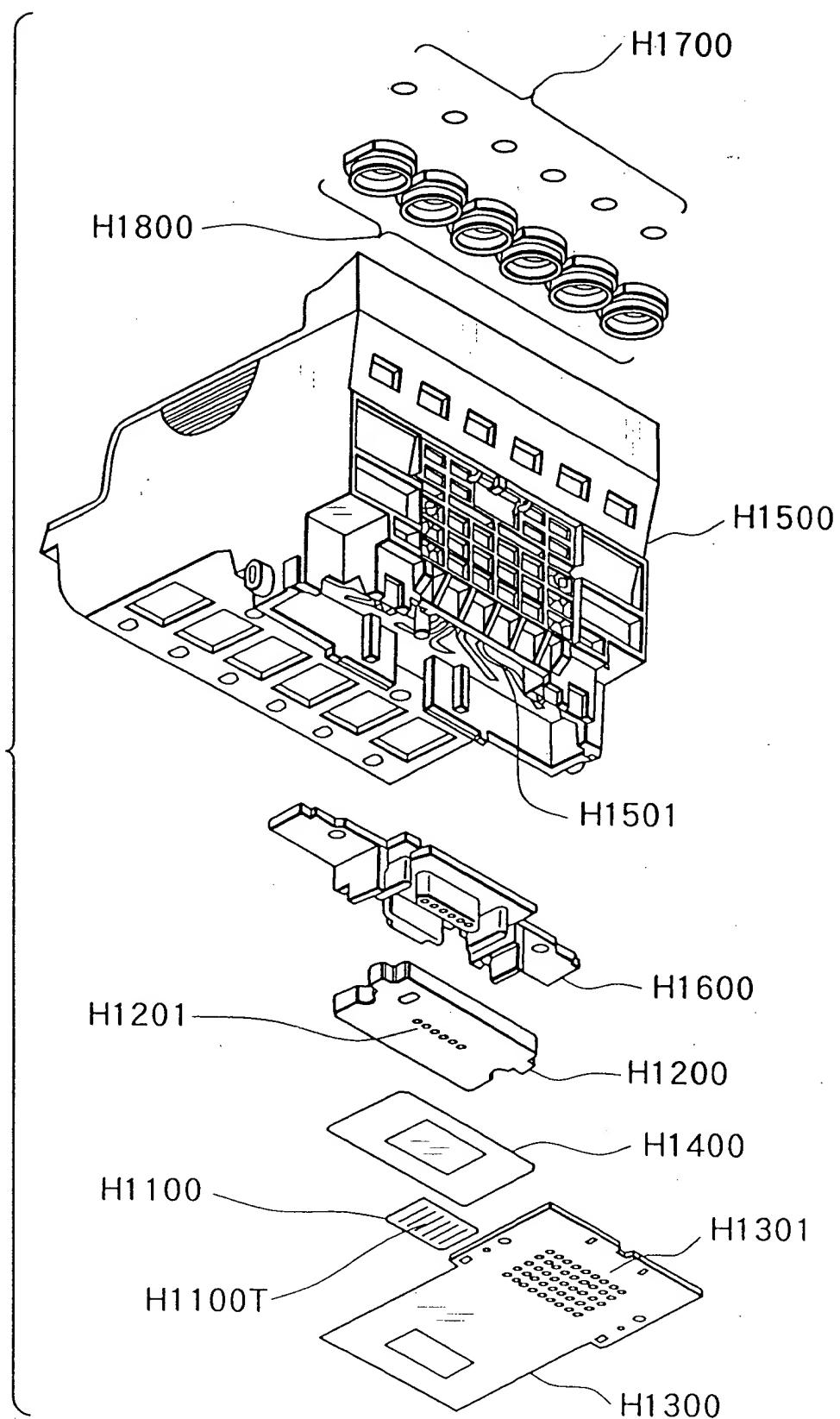


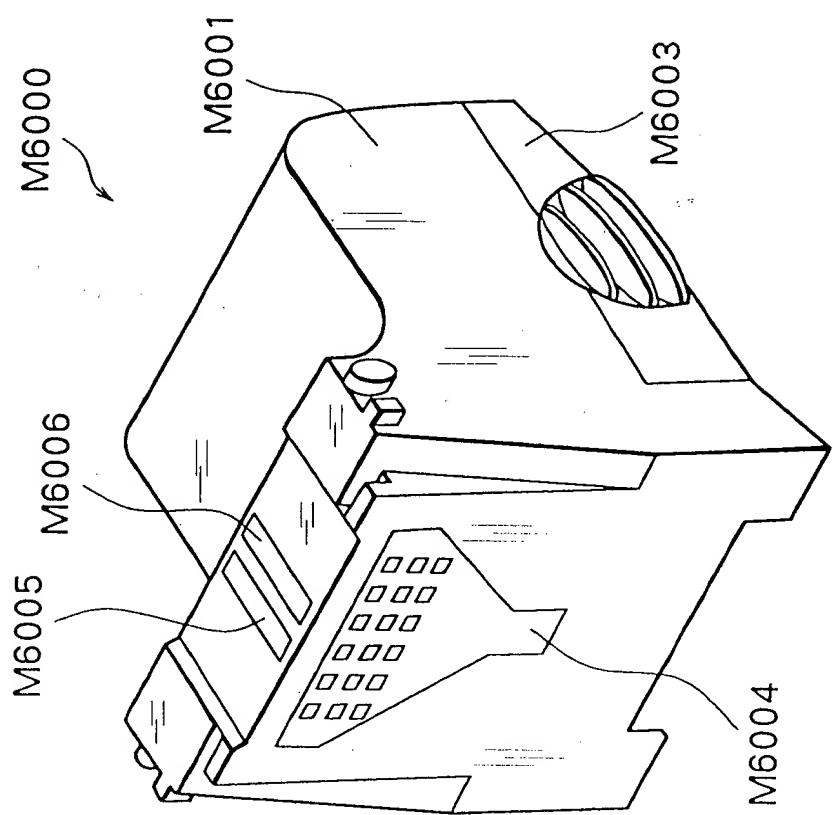
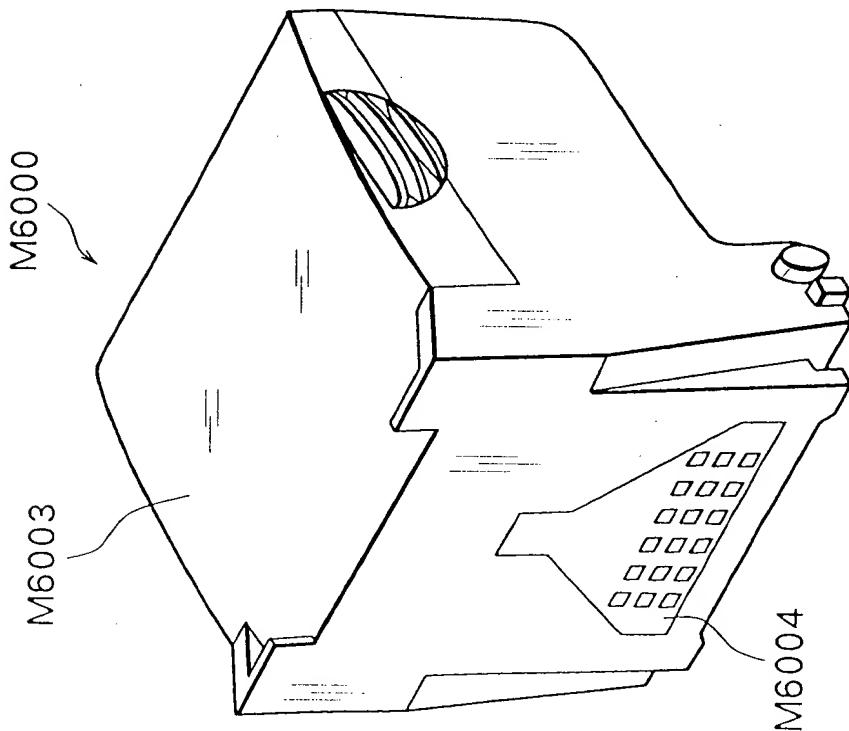
FIG. 6B**FIG. 6A**

FIG. 7

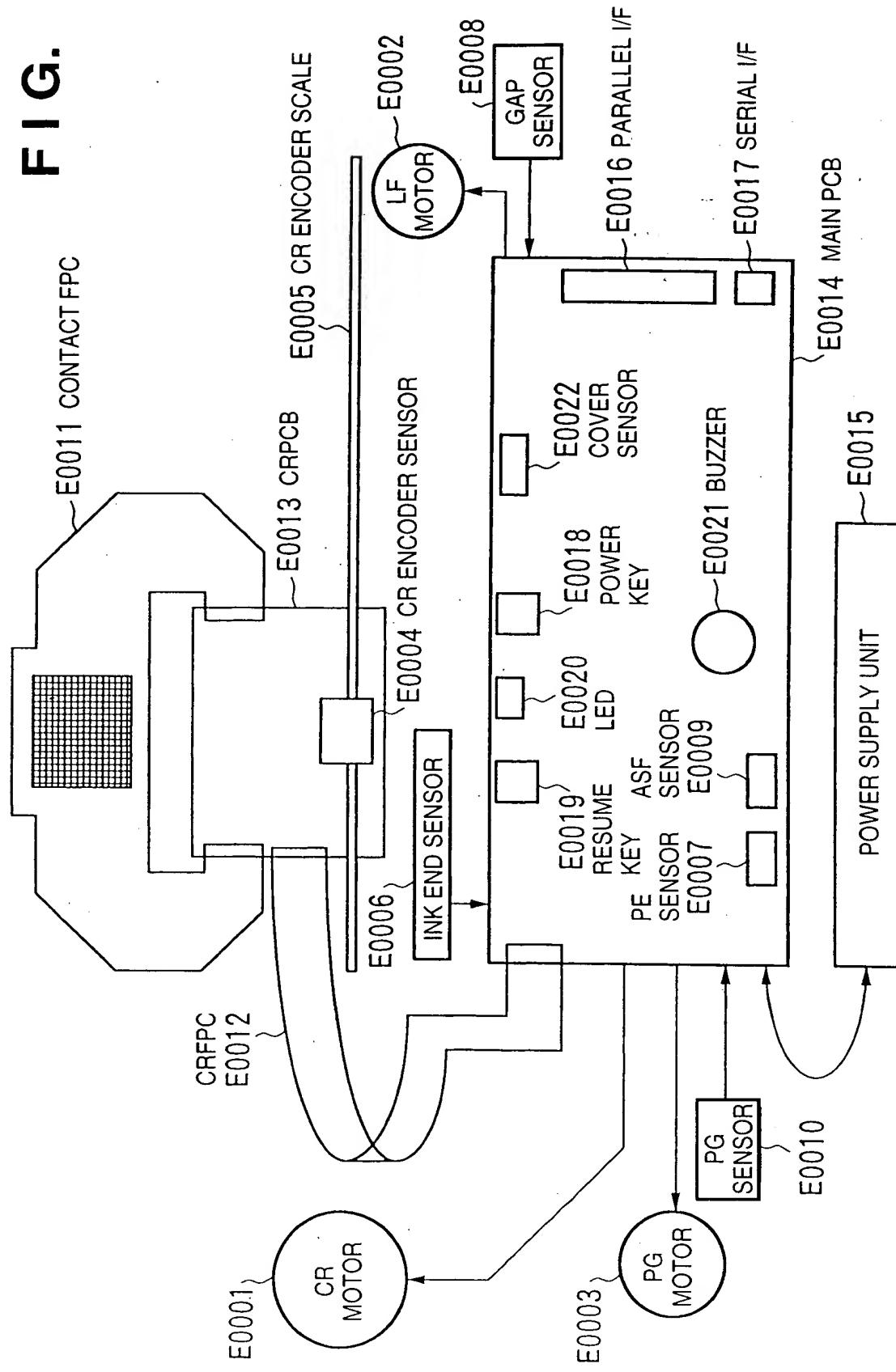
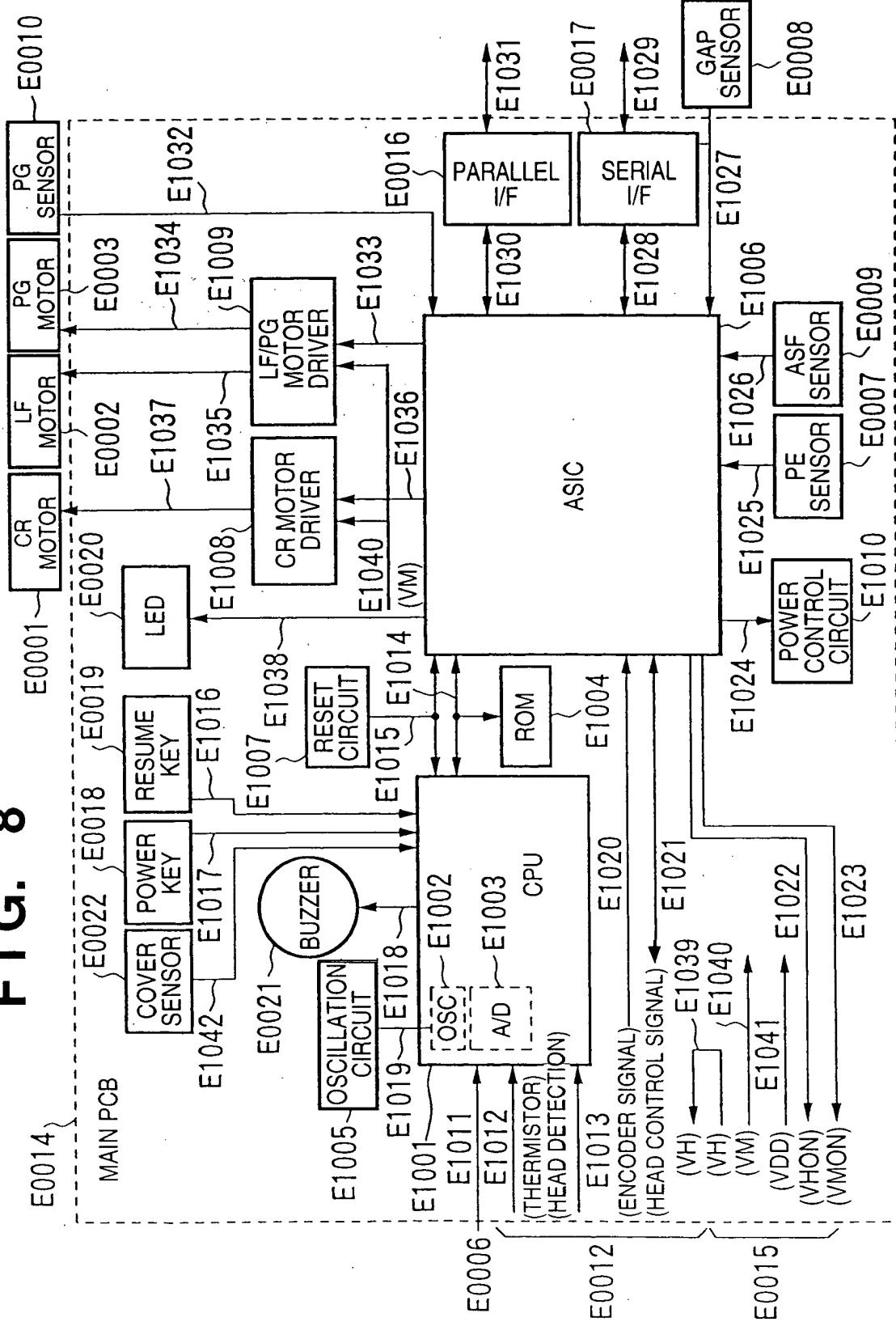


FIG. 8



9
FIG.

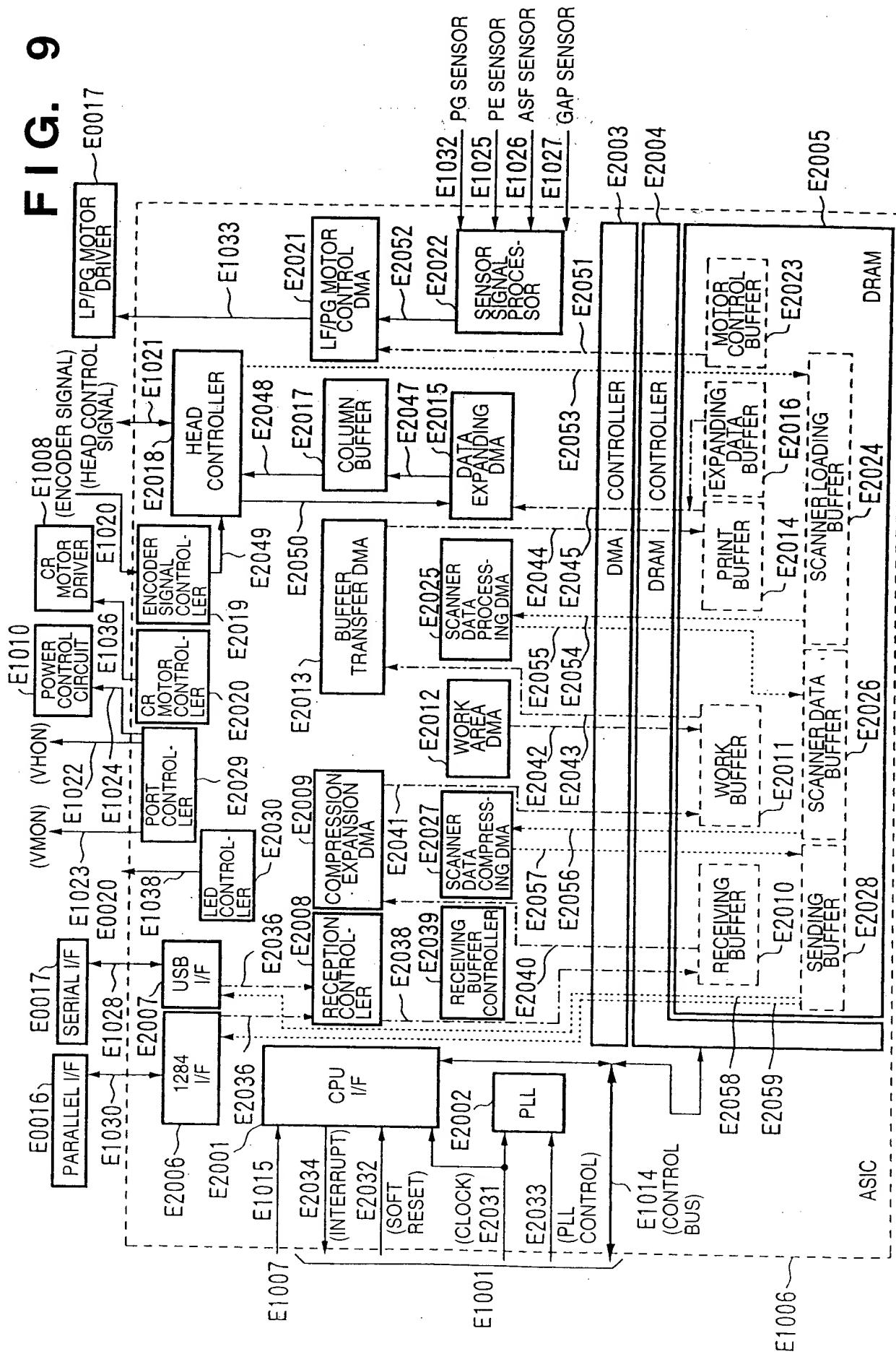


FIG. 10

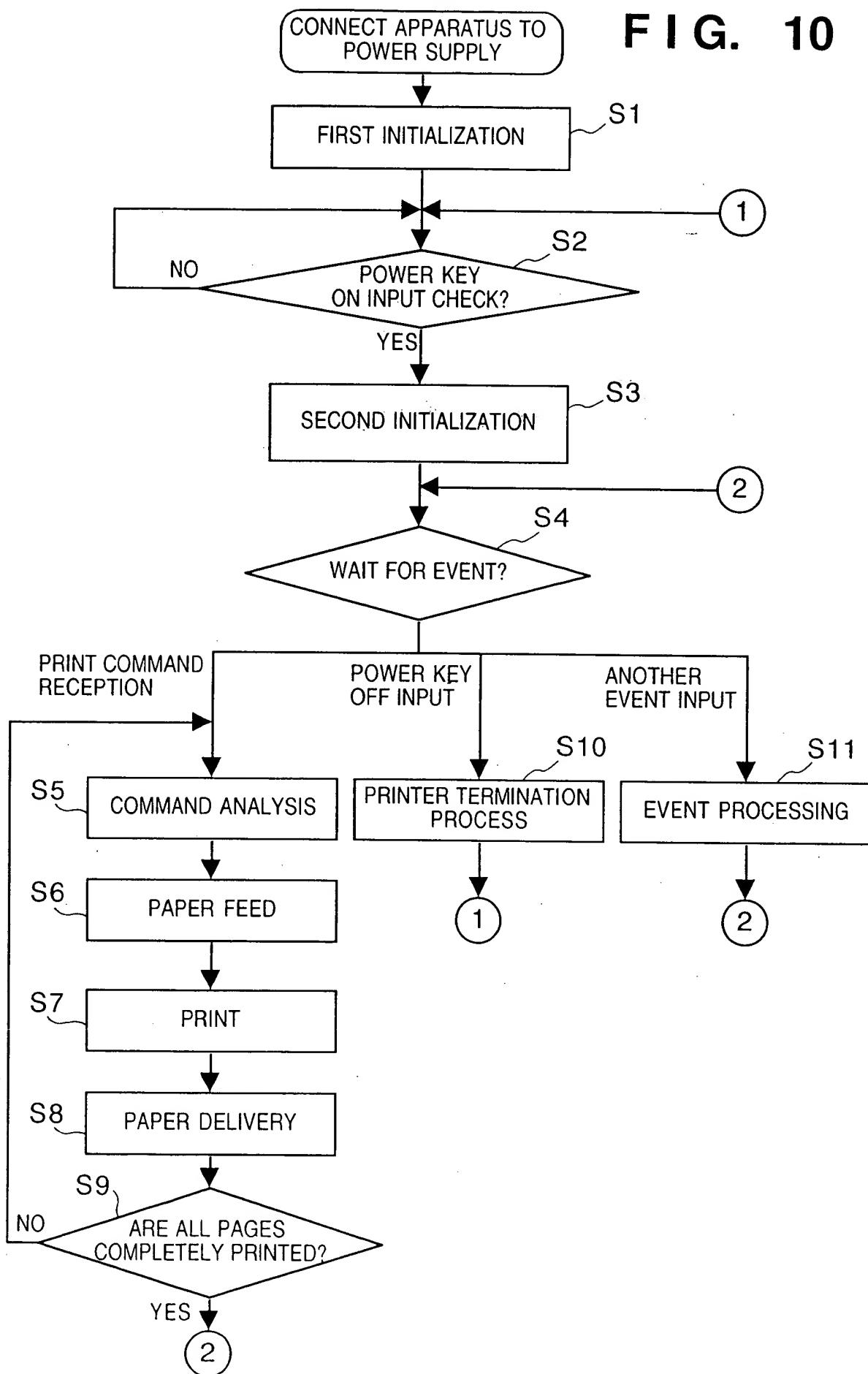
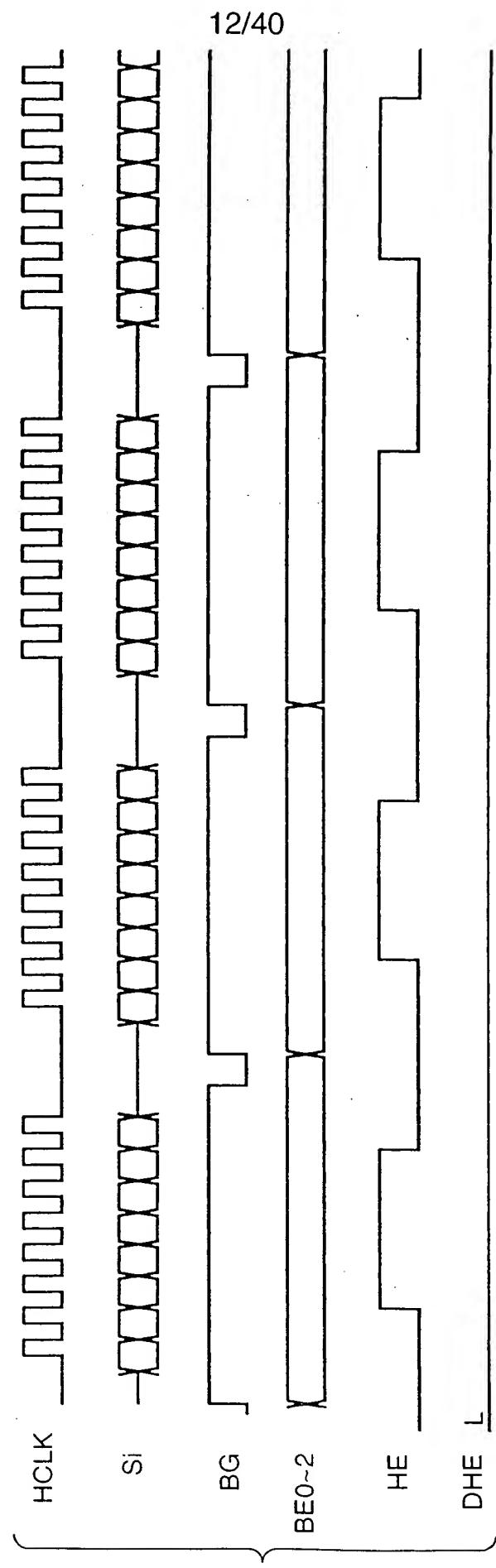


FIG. 12



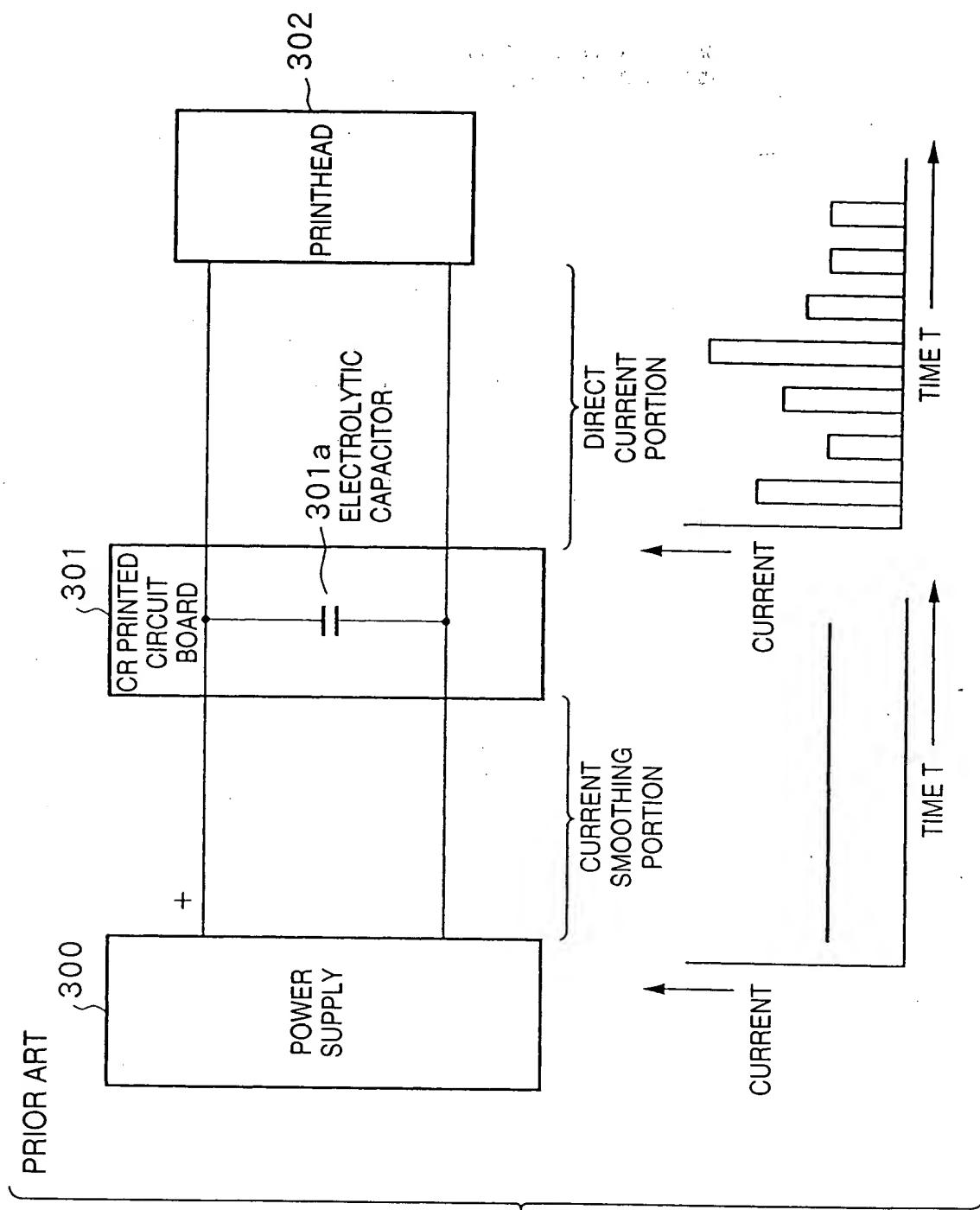


FIG. 13

FIG. 14

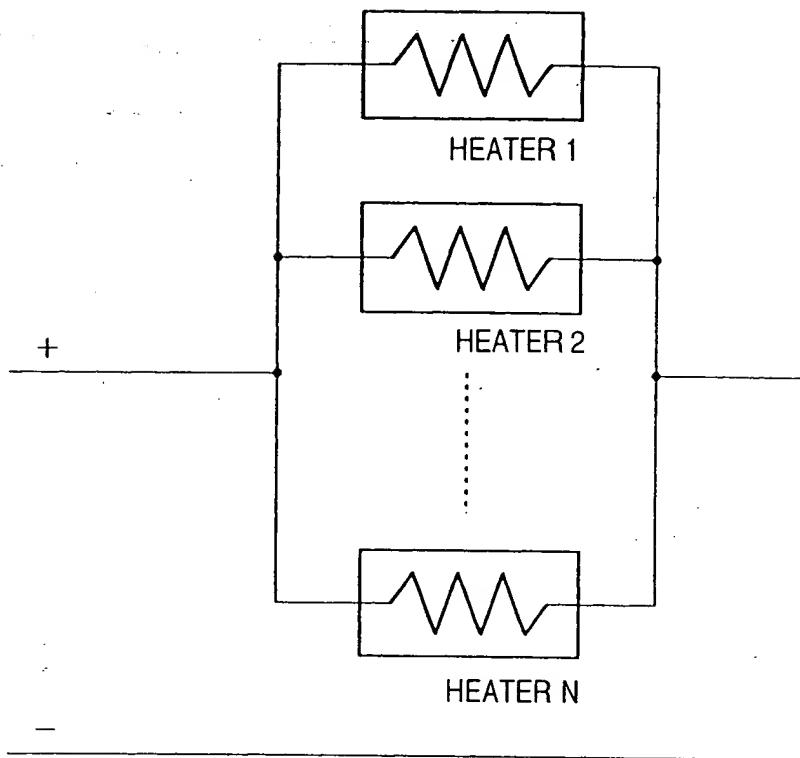


FIG. 15

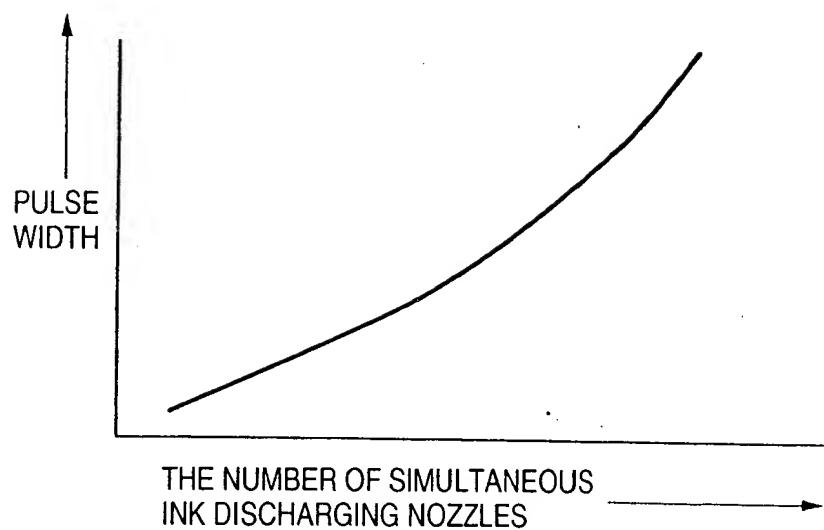


FIG. 16

HEATER RANK	TrON RANK	TEMPERATURE RANK	DRIVING PULSE WIDTH
1	1	~20°C	1.5
		~30°C	1.4
		~40°C	1.3
		~50°C	1.2
		50°C OR MORE	1.1
2		~20°C	1.6
		~30°C	1.5
		~40°C	1.4
⋮	⋮	⋮	⋮
⋮	⋮	⋮	⋮
⋮	⋮	⋮	⋮
⋮	⋮	⋮	⋮
8	8	~20°C	2.9
		~30°C	2.8
		~40°C	2.7
		~50°C	2.6
		50°C OR MORE	2.4

FIG. 17

HEATER RANK	TrON RANK	TEMPERATURE RANK	THE NUMBER OF SIMULTANEOUS INK DISCHARGING NOZZLES			
			0 ~ 7	~ 15	~ 23	~ 31
1	1	~20°C	1.2	1.3	1.4	1.5
		~30°C	1.1	1.2	1.3	1.4
		~40°C	1	1.1	1.2	1.3
		~50°C	0.9	1	1.1	1.2
		50°C OR MORE	0.8	0.9	1	1.1
2		~20°C	1.3	1.4	1.5	1.6
		~30°C	1.2	1.3	1.4	1.5
		~40°C	1.1	1.2	1.3	1.4
		⋮	⋮	⋮	⋮	⋮
		⋮	⋮	⋮	⋮	⋮
		⋮	⋮	⋮	⋮	⋮
		⋮	⋮	⋮	⋮	⋮
8	8	~20°C	2.2	2.4	2.6	2.9
		~30°C	2.2	2.4	2.6	2.8
		~40°C	2.2	2.3	2.5	2.7
		~50°C	2	2.2	2.3	2.6
		50°C OR MORE	1.9	2.1	2.2	2.4

8×8×5=320

FIG. 18

HEATER RANK	TrON RANK	TEMPERATURE RANK	DRIVING PULSE No.
1	1	~20°C	5
		~30°C	4
		~40°C	3
		~50°C	2
		50°C OR MORE	1
2		~20°C	6
		~30°C	5
		~40°C	4
⋮	⋮	⋮	⋮
⋮	⋮	⋮	⋮
⋮	⋮	⋮	⋮
8	8	~20°C	16
		~30°C	15
		~40°C	14
		~50°C	13
		50°C OR MORE	12

8×8×2=128

FIG. 19

DRIVING PULSE No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
FUNDAMENTAL PULSE WIDTH (μ S)	0.8	0.9	1	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2	2.1	2.2	2.2

FIG. 20

DRIVING PULSE No.	THE NUMBER OF SIMULTANEOUS INK DISCHARGING NOZZLES			
	0~7	~15	~23	~32
1	0	0.1	0.2	0.3
2	0	0.1	0.2	0.3
3	0	0.1	0.2	0.3
4	0	0.1	0.2	0.3
5	0	0.1	0.2	0.4
6	0	0.1	0.3	0.4
7	0	0.1	0.3	0.4
8	0	0.2	0.3	0.4
9	0	0.1	0.3	0.5
10	0	0.1	0.3	0.5
11	0	0.2	0.4	0.5
12	0	0.2	0.3	0.5
13	0	0.2	0.3	0.6
14	0	0.2	0.4	0.6
15	0	0.2	0.4	0.6
16	0	0.2	0.4	0.7

FIG. 21

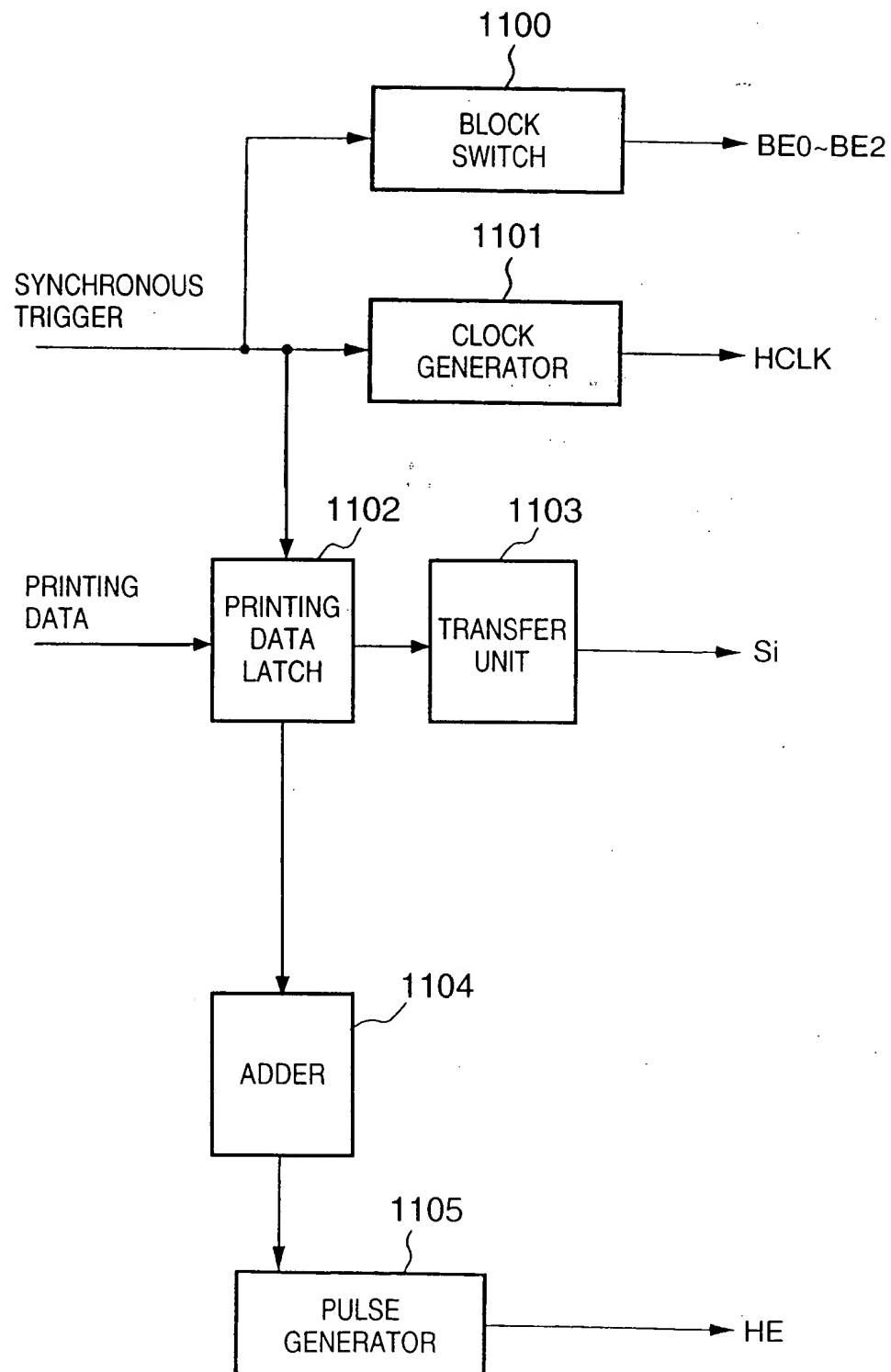


FIG. 22

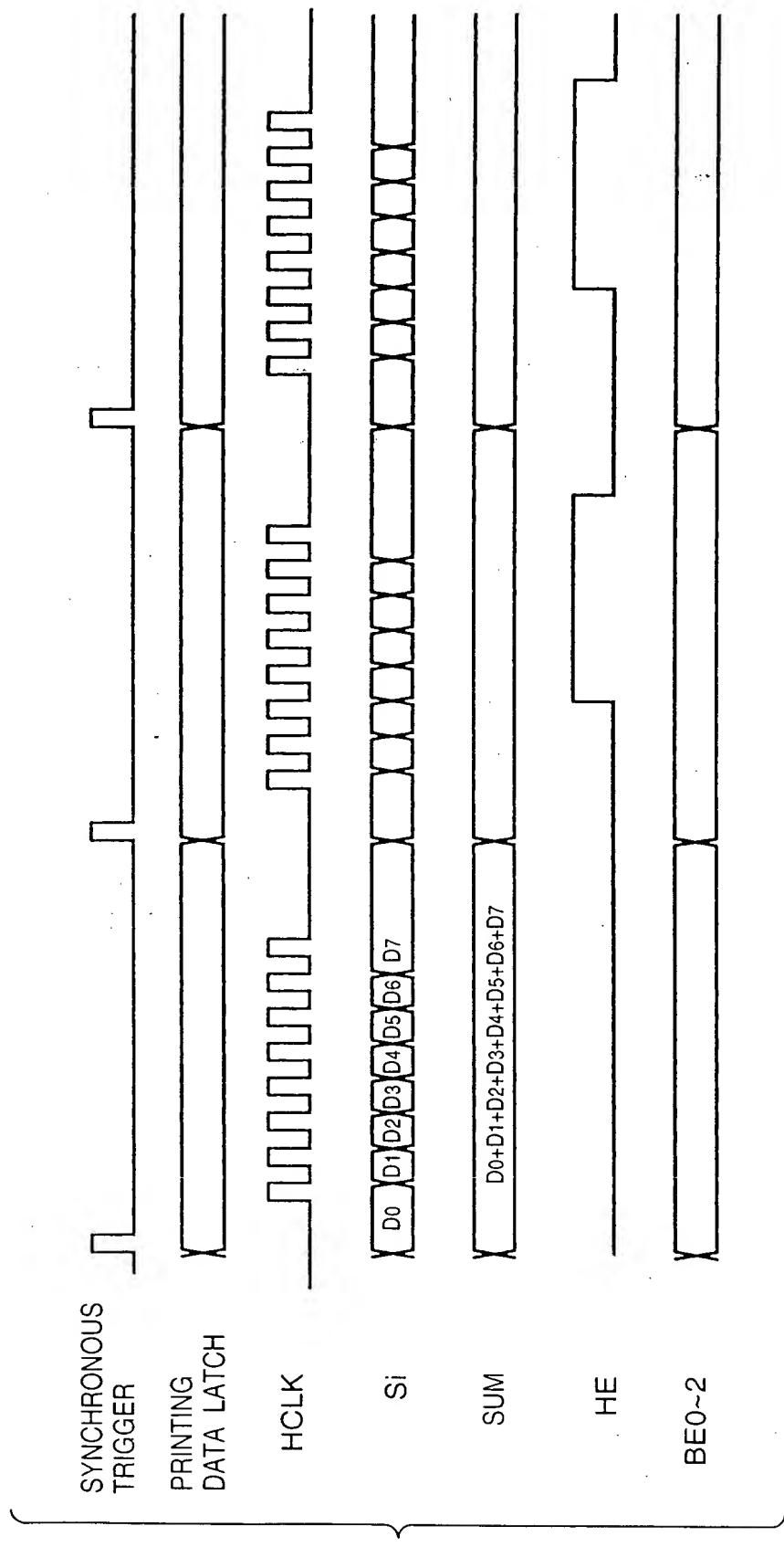


FIG. 23

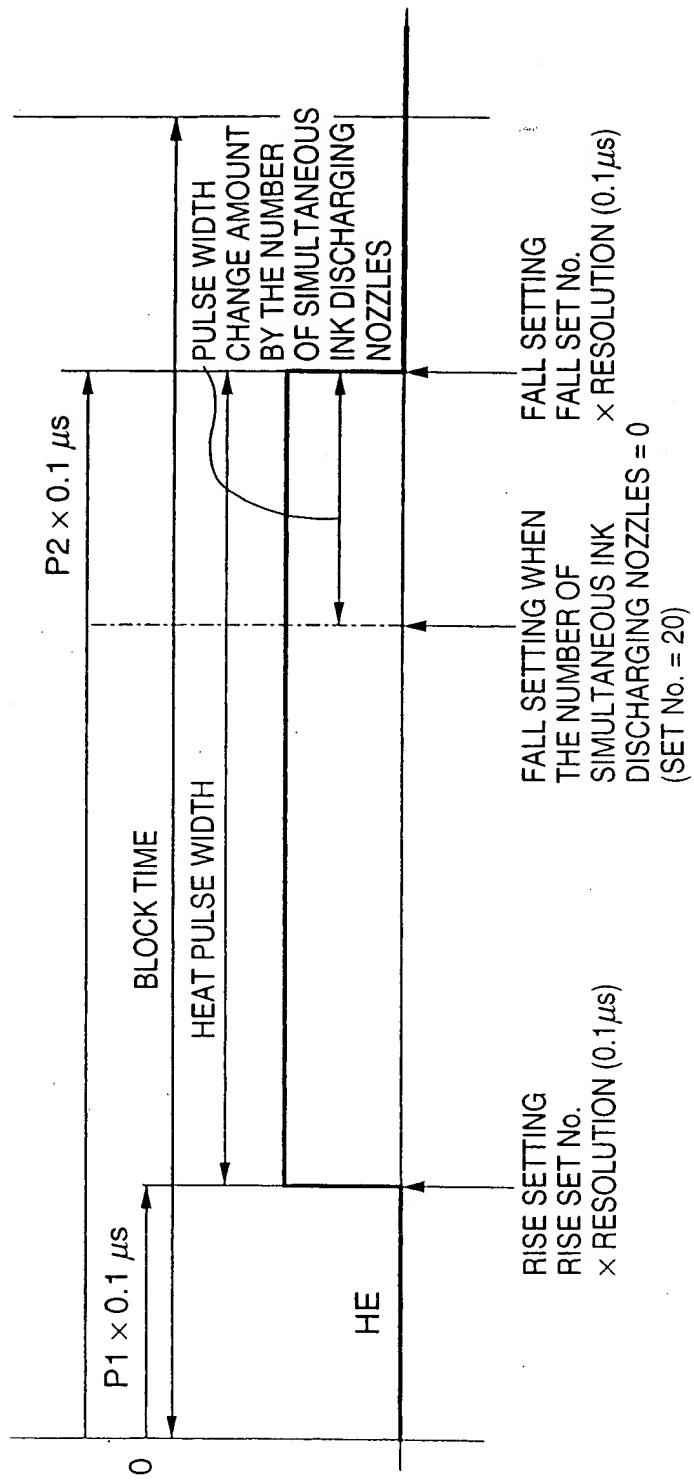


FIG. 24

HEAD ROM SET No.— PULSE WIDTH
(AT 20 ~ 30°C)

HEAD ROM SET No.	PULSE WIDTH
1	0.6
2	0.7
3	0.8
4	0.9
...	...
...	...
...	...
...	...
...	...

FIG. 25

HEAD ROM SET No. — DRIVING PULSE No. CORRESPONDENCE TABLE

HEAD ROM SET No.	TEMPERATURE RANK				
	~20°C	~30°C	~40°C	~50°C	~50°C OR MORE
4	5	4	3	2	1
5	6	5	4	3	2
6	7	6	5	4	3
7	8	7	6	5	4
⋮	⋮	⋮	⋮	⋮	⋮
⋮	⋮	⋮	⋮	⋮	⋮
⋮	⋮	⋮	⋮	⋮	⋮
⋮	⋮	⋮	⋮	⋮	⋮
⋮	⋮	⋮	⋮	⋮	⋮

† NUMBER IS DRIVING PULSE No.

FIG. 26

DRIVING PULSE No. — P1 SET VALUE

DRIVING PULSE No.	P1	PULSE WIDTH
1	14	0.6
2	13	0.7
3	12	0.8
4	11	0.9
⋮	⋮	⋮
⋮	⋮	⋮
⋮	⋮	⋮
⋮	⋮	⋮

FIG. 27

DRIVING PULSE No. — SIMULTANEOUS INK DISCHARGING PULSE No.

DRIVING PULSE No.	THE NUMBER OF SIMULTANEOUS INK DISCHARGING NOZZLES			
	0~7	~15	~23	~32
1	0	3	6	9
2	0	3	6	9
3	0	3	7	9
4	0	4	7	10
⋮	⋮	⋮	⋮	⋮
⋮	⋮	⋮	⋮	⋮
⋮	⋮	⋮	⋮	⋮
⋮	⋮	⋮	⋮	⋮
⋮	⋮	⋮	⋮	⋮

↑ NUMBER IS SIMULTANEOUS DISCHARGING PULSE No.

FIG. 28

SIMULTANEOUS INK DISCHARGING PULSE No. — P2 SET VALUE

SIMULTANEOUS INK DISCHARGING PULSE No.	P2	PULSE MODULATION WIDTH
0	20	0
1	21	0.1
2	22	0.2
3	23	0.3
4	24	0.4
...
...
...
...

FIG. 29

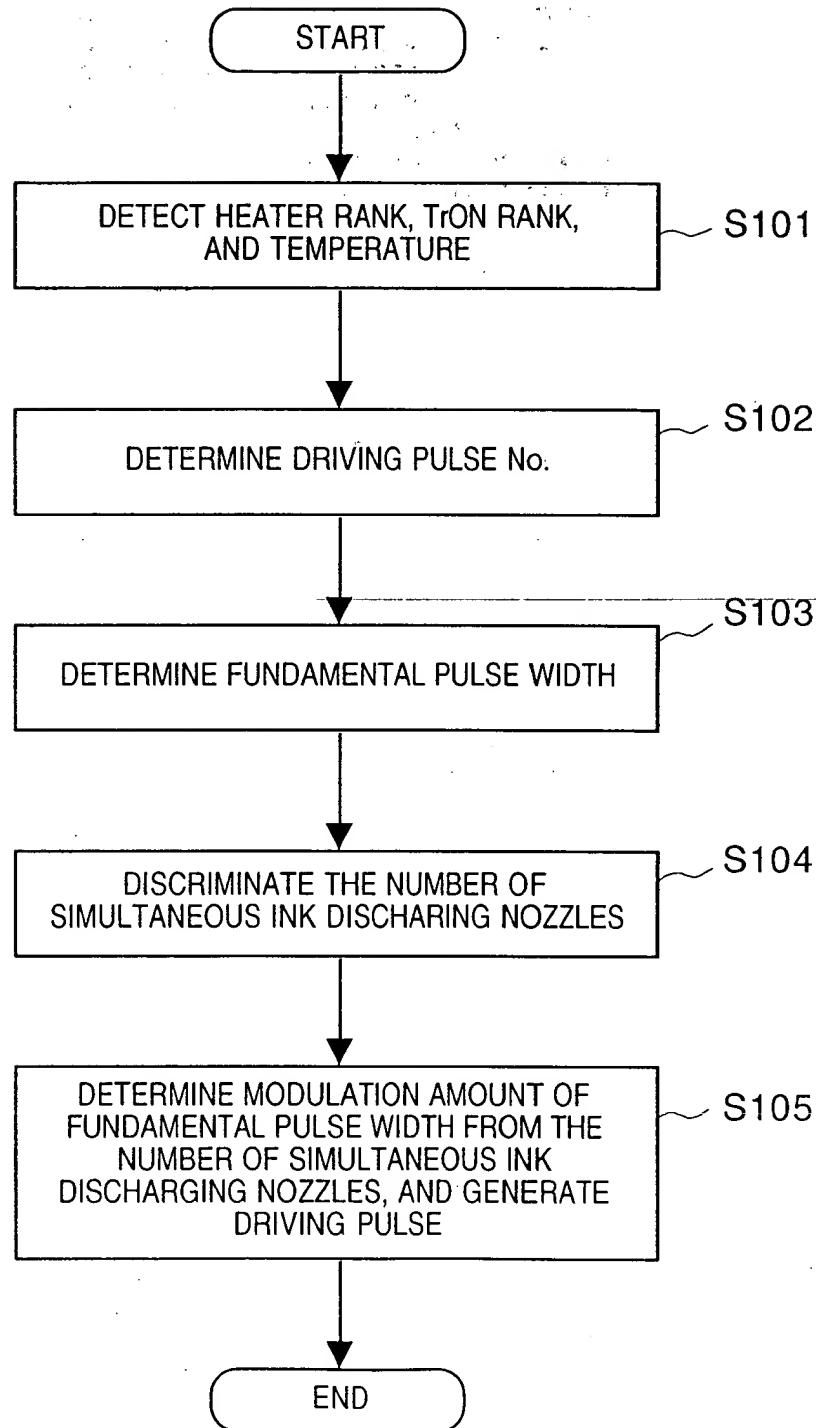


FIG. 30

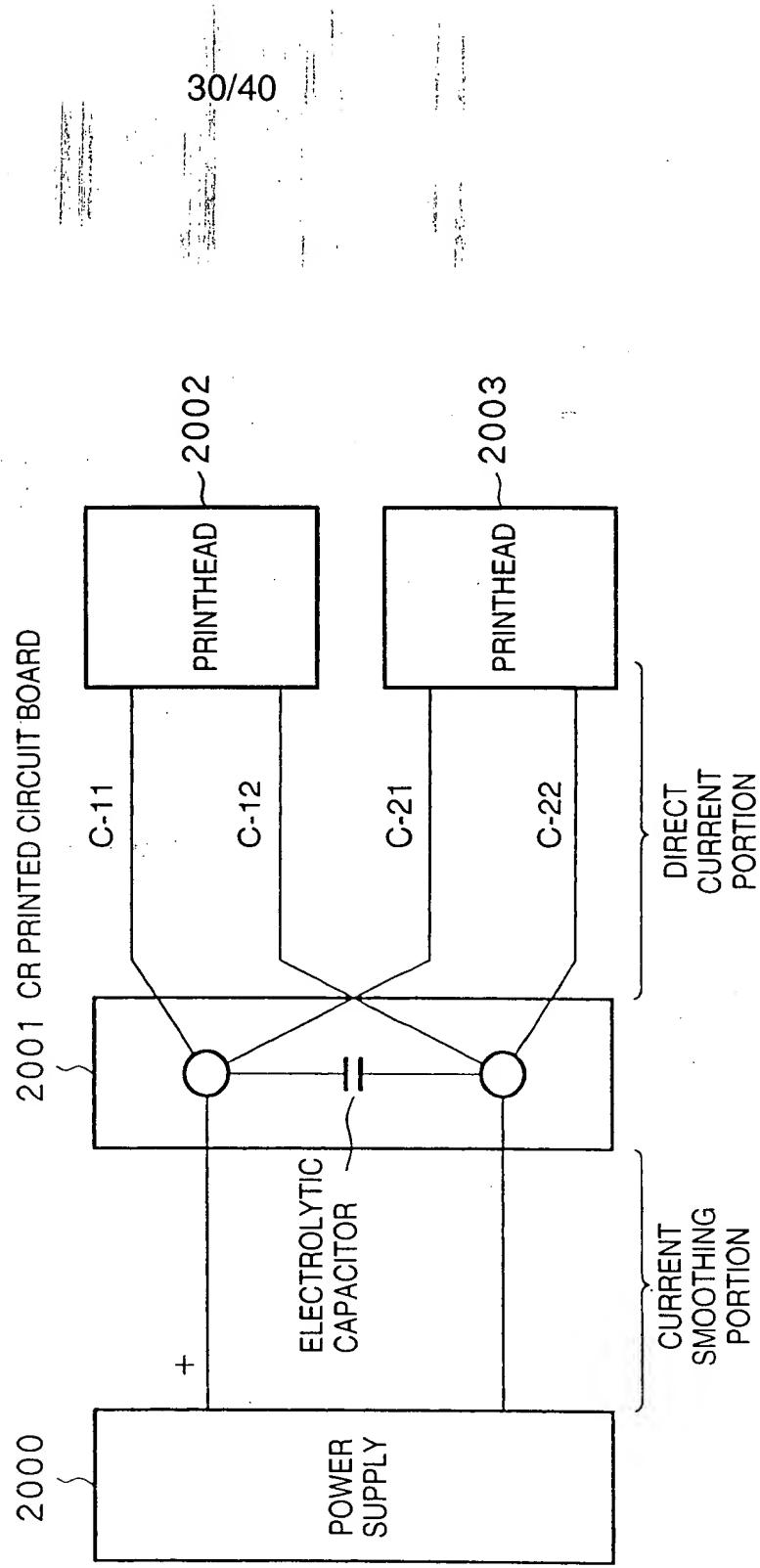


FIG. 31

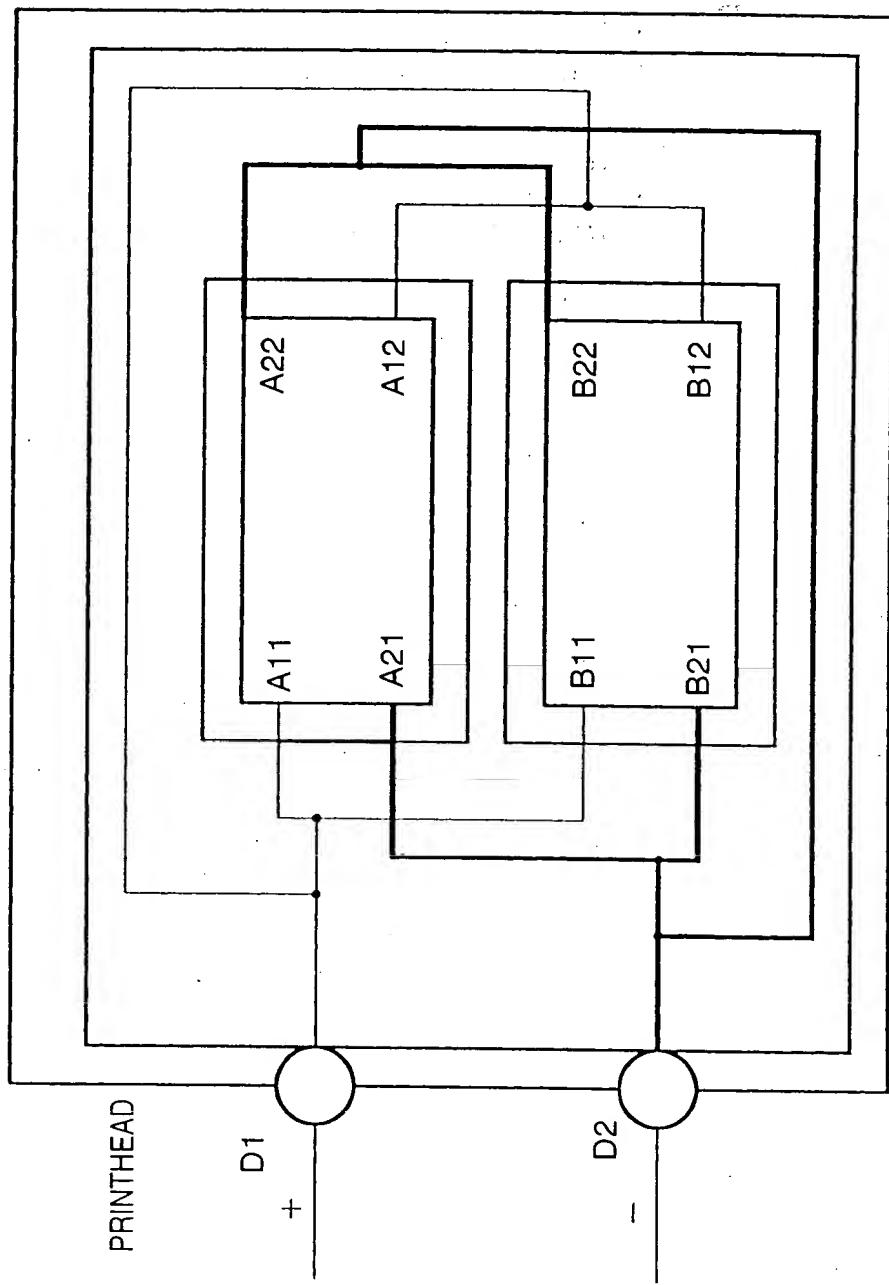
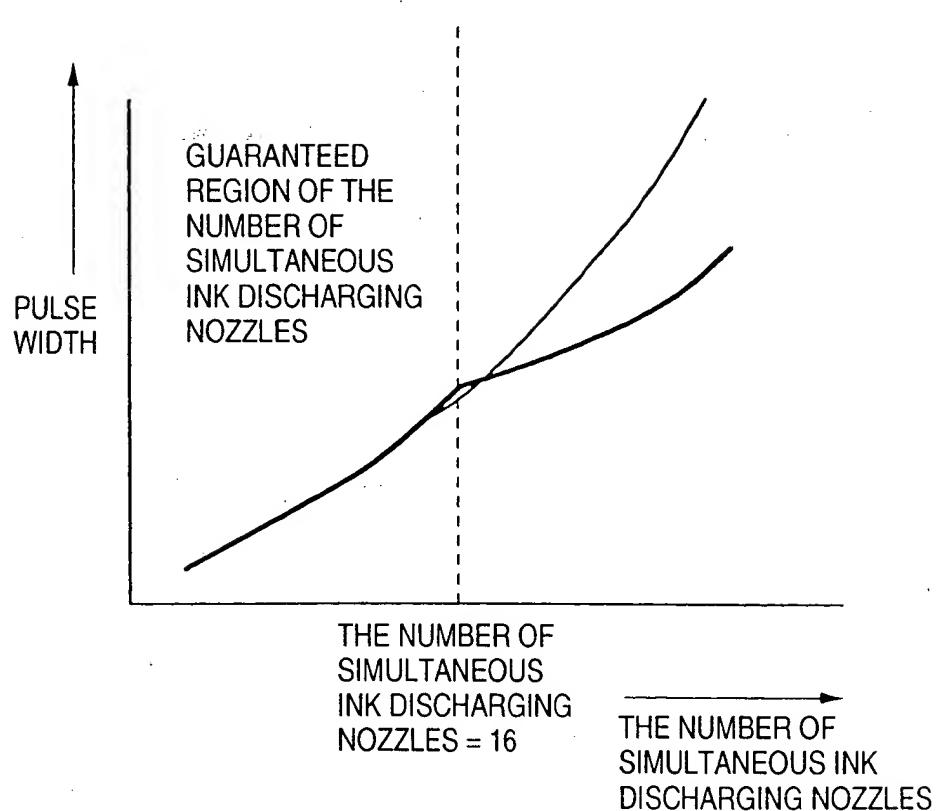


FIG. 32



PULSE TABLE IN WHICH PULSE WIDTH IS NARROWED WHEN THE NUMBER
OF SIMULTANEOUS INK DISCHARGING NOZZLES IS 16 OR MORE

FIG. 33

DRIVING PULSE No.	THE NUMBER OF SIMULTANEOUS INK DISCHARGING NOZZLES		
	0~7	~15	~23
1	0	0.1	0.1
2	0	0.1	0.2
3	0	0.1	0.2
4	0	0.1	0.2
5	0	0.1	0.2
6	0	0.1	0.2
7	0	0.1	0.2
8	0	0.2	0.2
9	0	0.1	0.3
10	0	0.1	0.3
11	0	0.2	0.2
12	0	0.2	0.3
13	0	0.2	0.3
14	0	0.2	0.3
15	0	0.2	0.3
16	0	0.2	0.3

FIG. 34

EXAMPLE IN WHICH THE NUMBER OF
SIMULTANEOUS INK DISCHARGING NOZZLES
= 8 IS UNIFORMLY DISTRIBUTED

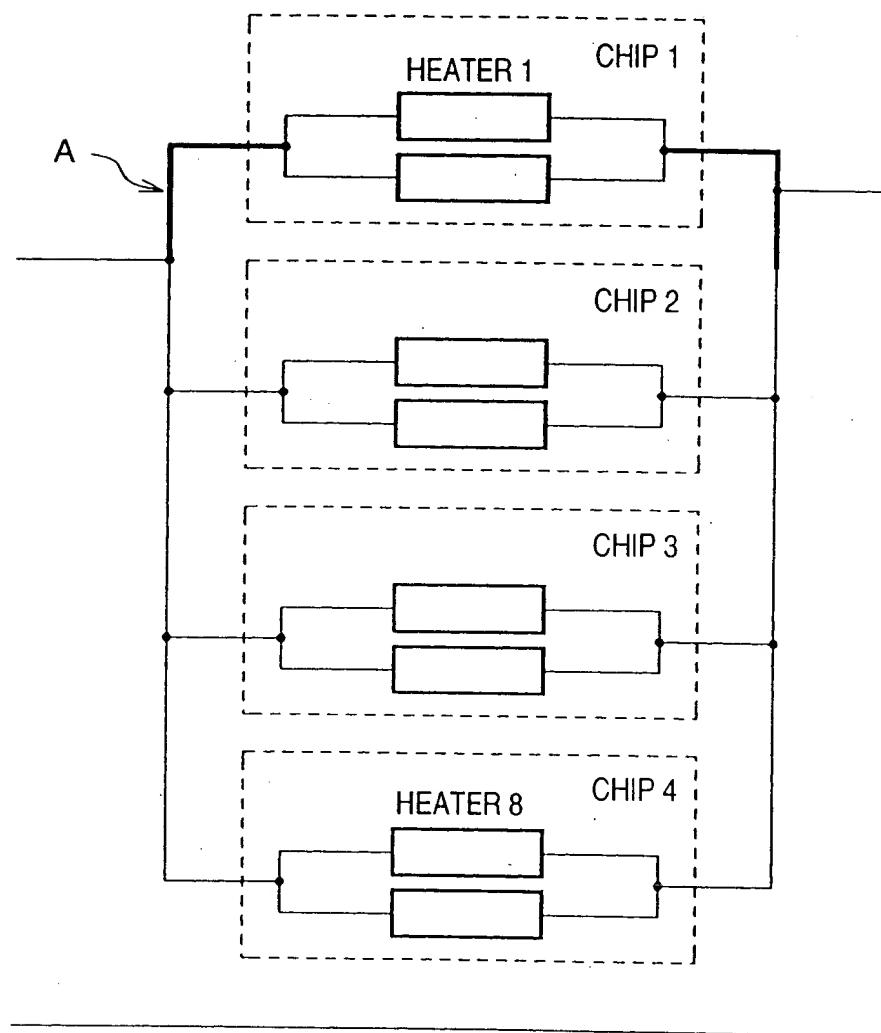


FIG. 35

EXAMPLE IN WHICH THE NUMBER OF
SIMULTANEOUS INK DISCHARGING NOZZLES
= 8 IS CONCENTRATED TO ONE CHIP

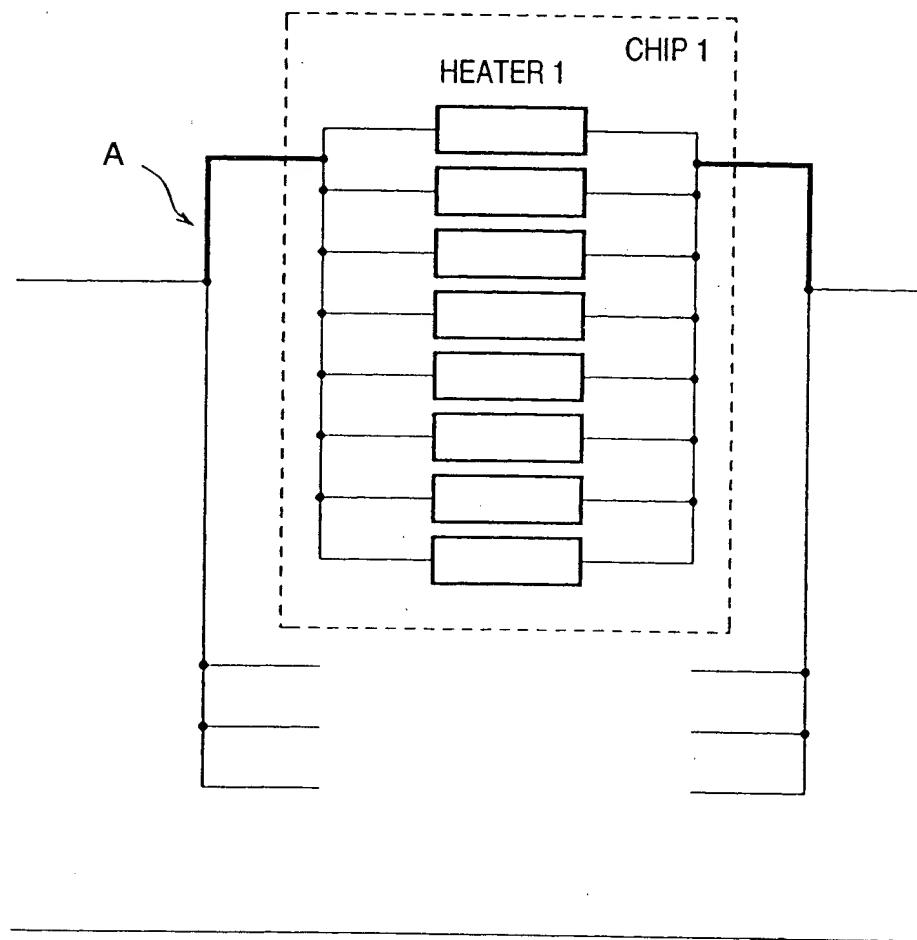
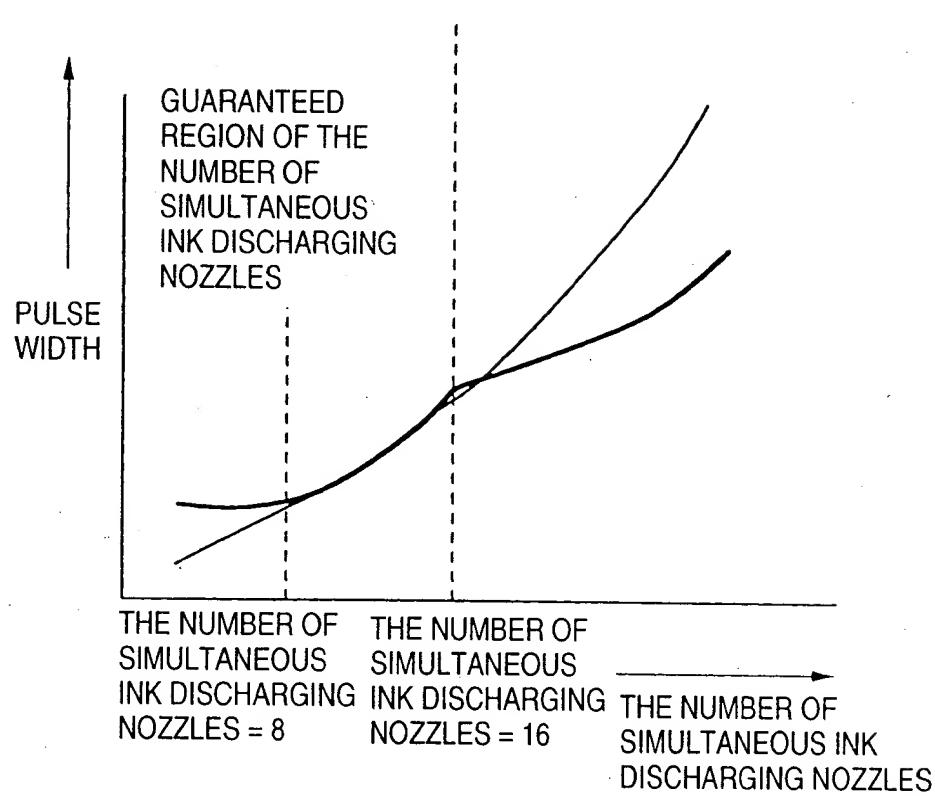


FIG. 36



EXAMPLE IN WHICH PULSE WIDTH IS INCREASED WHEN THE NUMBER OF SIMULTANEOUS INK DISCHARGING NOZZLES IS 0 TO 7

FIG. 37

DRIVING PULSE No.	THE NUMBER OF SIMULTANEOUS INK DISCHARGING NOZZLES		
	0~7	~15	~23
1	0.1	0.1	0.1
2	0.1	0.1	0.2
3	0.1	0.1	0.2
4	0.1	0.1	0.2
5	0.1	0.1	0.2
6	0.1	0.1	0.2
7	0.1	0.1	0.2
8	0.1	0.2	0.2
9	0.1	0.1	0.3
10	0.1	0.1	0.3
11	0.1	0.2	0.2
12	0.1	0.2	0.3
13	0.2	0.2	0.3
14	0.1	0.2	0.3
15	0.2	0.2	0.3
16	0.2	0.2	0.3

FIG. 38

SIMULTANEOUS INK DISCHARGING PULSE No. — P2 SET VALUE

SIMULTANEOUS INK DISCHARGING PULSE No.	P2	PULSE MODULATION WIDTH
0	20	0
1	21	0.1
2	22	0.2
3	23	0.3
4	24	0.4
⋮	⋮	⋮
⋮	⋮	⋮
⋮	⋮	⋮
⋮	⋮	⋮
⋮	⋮	⋮

FOR PRINTING MODE A

SIMULTANEOUS INK DISCHARGING PULSE No. — P2 SET VALUE

SIMULTANEOUS INK DISCHARGING PULSE No.	P2	PULSE MODULATION WIDTH
0	0	0
1	1	0.1
2	2	0.2
3	3	0.3
4	4	0.4
⋮	⋮	⋮
⋮	⋮	⋮
⋮	⋮	⋮
⋮	⋮	⋮
⋮	⋮	⋮

FOR PRINTING MODE B

FIG. 39

DRIVING PULSE No. — SIMULTANEOUS INK DISCHARGING PULSE No.

DRIVING PULSE No.	THE NUMBER OF SIMULTANEOUS INK DISCHARGING NOZZLES			
	0~7	~15	~23	~32
1	0	3	6	9
2	0	3	6	9
3	20	3	7	9
4	20	4	7	10
...
...
...
...

FIG. 40

SIMULTANEOUS INK DISCHARGING PULSE No. — P2 SET VALUE

SIMULTANEOUS INK DISCHARGING PULSE No.	P2	PULSE MODULATION WIDTH
0	20	0
1	21	0.1
2	22	0.2
3	23	0.3
4	24	0.4
⋮	⋮	⋮
⋮	⋮	⋮
⋮	⋮	⋮
20	20	0

FOR PRINTING MODE A

SIMULTANEOUS INK DISCHARGING PULSE No. — P2 SET VALUE

SIMULTANEOUS INK DISCHARGING PULSE No.	P2	PULSE MODULATION WIDTH
0	0	0.1
1	1	0.2
2	2	0.3
3	3	0.4
4	4	0.5
⋮	⋮	⋮
⋮	⋮	⋮
⋮	⋮	⋮
20	21	0.2

FOR PRINTING MODE B